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Introduction

In 1946, the 'Basic Plan for the Reconstruction of Rotterdam' was published. It was designed by a team headed by C. van Traa, and it succeeded a plan that had been conceived during the war by Van Traa's predecessor, W.G. Witteveen. Both in the Netherlands and abroad, the Basic Plan was welcomed as one of the landmarks of modern town planning. Dutch critics praised the scientific, democratic method which they took to be one of its most striking features, and they tended to emphasize the contrasts with the original plan by Witteveen. Their dislike of that plan was due not only to the lack of proper public discussions about the plan – during the occupation this had been impossible – but also to Witteveen's intention of treating streets and public squares as vehicles for a three dimensional design. Van Traa was praised for transforming town planning into a scientific discipline free from the constraints of personal preferences and artistic convictions, refusing to force architects and their employers into a predetermined framework.¹ Thus, Van Traa became the champion of a basically democratic way of shaping the post-war city.

The historical image that was construed in this way developed against a specific background: the idea that modern architecture and town planning in the Netherlands could boast a continuous tradition which reflected the international trends formulated by the CIAM congresses. By far the most important town planning scheme emanating from this tradition was, of course, the General Extension Plan for Amsterdam (1934), designed by C. van Eesteren in close co-operation with Th.K. van Lohuizen. Van Traa's Basic Plan was seen as continuing this tradition; the original plan by Witteveen was simply discounted as a retreat to methods of the past.² It is exactly this analysis that is examined in this study. Research carried out recently has shown to what extent the General Extension Plan by Van Eesteren and Van Lohuizen was part of a tradition in Dutch town planning. This tradition stood apart from the international avant-garde and developed in the municipal planning offices of Rotterdam – the home town of both Van Eesteren and Van Lohuizen – and Amsterdam. Far from being an outsider, Witteveen was one of the most promising representatives of this traditional, pragmatic approach to town planning. Furthermore, the differences between the method represented by the General Extension Plan and the approach put forward in the Basic Plan are remarkable. The General Extension Plan is a town planning design; the Basic Plan is a programme. Whereas the General Extension Plan envisaged an image of Amsterdam as a city that had reached the full stage of its development, the Basic Plan divided the city into an indefinite number of neighbourhood units, leaving future social and economic tendencies to decide the actual size and make-up of the city. The General Extension Plan tried to unveil the 'natural' tendencies inherent in the city, evaluating them and using them as pointers

towards its future. The makers of the Basic Plan replaced this analysis of the existing city with the abstract image of a new town that was intended to comply with the needs of an entirely new society. In other words, the General Extension Plan *portrayed* the city as it had developed so far; the Basic Plan *projected* an image of an entirely new city. It follows that it was not the General Extension Plan, but the Basic Plan which opened the way to a method of town planning in which scientifically collected data were 'translated' into a programme, eliminating 'unscientific', personal notions about town planning *form*. These differences separate the Basic Plan from both the General Extension Plan and the plan made by Witteveen. It was not Witteveen's plan that broke away from the pre-war tradition of modern Dutch architecture, but the Basic Plan.

What explains this sudden shift? Personal differences of opinion between Witteveen and Van Traa, his secretary and successor, played only a minor role. Much more important were the effects of the Second World War, which remapped the world politically and economically. As one of the world's largest ports, Rotterdam was highly sensitive to those changes. If the pre-war economic world would not return, there was little sense in restoring the city according to what it had been before; Rotterdam did not need a *reconstruction* plan, but a plan for a new city. All the countries engaged in the war were confronted with elaborate forms of social and economic planning, which unleashed forces hitherto undreamt of. It was generally believed that the instruments relied upon to achieve this could also be used to reshape post-war society. Whatever the outcome of the war, the result would be man-made. If one wanted to know what the city would be like in the future, it was not the inherent, 'natural' tendencies that pointed the way, but the plans for a post-war reconstruction of the world in a social, economic and political sense. This meant that observing the processes of the city could no longer be trusted as a means of obtaining a reference to the society of the future. Since the Western Allies were fighting the war to make the world safe for democracy, planning and democracy would have to be reconciled.

In this study, the city has been considered as a physical structure, not as a collection of individual buildings. The programme that carries this structure has also been taken into account. In this respect town planning history reflects literary history; in analyzing a novel, it is impossible to separate its content from its form. Two pairs of opposite phenomena determine the battleground on which post-war town planning has developed: mobility versus place, and content versus form. When mobility increased – usually following the introduction of new means of transportation and communication – the position of towns and regions could be redefined. The area in which the influence of the city could be felt changed, and so did its position in the world economy. As soon as the content of a city – its social and economic processes – became the subject of research that ignored their physical manifestation, town planning survey began to dissociate itself from town planning design. At the same time, town planning design focused on the distribution of 'functions' in a two-dimensional lay-out, leaving the third dimension to the architecture.

Although historical research literature provided useful information, archives

were the most fertile resources for this study. The most important were the municipal archives in Rotterdam, the archives of the Institute of War Documentation (Amsterdam), the Architectural Institute (Amsterdam), the Ministry for Public Housing, Planning and the Environment (The Hague), the family archive of Ringers (The Hague), the Bundesarchiv (Koblenz, Germany), the Berlin Document Center (Berlin, Germany), and the Zentralarchiv (Potsdam, Germany, formerly the State Archive of the German Democratic Republic).

The historical evolution of Rotterdam

Rotterdam has developed as a typical Dutch town, its 'underlayer' being the man-made landscape structured by dikes and ditches. Instead of being a strange intrusion in a natural environment, the city grew harmoniously out of this landscape. North of the river, where the moorland was very wet, the distance between the ditches had to be relatively small. After they had been dug, dehydration caused the level of the soil to sink. This necessitated the construction of dikes, which linked the ditches together, thus creating 'combes'. Where the peat was exploited lakes developed. By the use of windmills it was possible to reclaim the land and create the typically Dutch phenomenon of the polder. For many centuries the landscape dictated the urban development of Rotterdam, the city that was built around a dam marking the outlet of the Rotte in the Meuse. Its origins were humble. The original settlement turned its back on the Meuse, being hidden from it by the dikes. Only after the upheaval that struck Europe during the sixteenth century did its fortune change. The Republic of the United Provinces was able to establish itself as an autonomous political unit and, while the rest of continental Europe fell victim to a long series of political and religious crises, the Republic succeeded in creating a vast colonial empire. Rotterdam benefitted greatly from these changes in the international political and economic situation. During the seventeenth century, the city doubled in size, adding a 'water city' south of the dike. After the completion of this extension, Rotterdam was characterized by its almost triangular shape and the composition of two distinct parts.

In the nineteenth century, Rotterdam again benefitted from changes in the international economic and political structure. When the tolls and tax borders were abolished by the emerging Laissez-Faire politics, the outlines of a vast economic space manifested themselves. After German unification in the 1870s, German industry boomed. Rotterdam became the sluice through which the Ruhr region imported raw materials and turned out its industrial products. This led to changes in the economic apparatus of the city. The merchants who owned the goods they shipped gave way to companies which specialized in transit activities; these modern companies did not own the goods they shipped; neither did Rotterdam serve as the market where these goods were traded. The traditional merchant classes abhorred this development and tried to prevent the changes that the growth of the transit harbour had made necessary. Both the canal to the sea (the New Waterway) and the railway linking Rotterdam to the

Southern provinces were promoted by the national government, and they were only reluctantly accepted by the local authorities.

The transit harbour attracted a rapidly-growing labour force for which new living quarters had to be built. The city began to grow at an unprecedented rate, covering much of the landscape which surrounded the historical triangle. Hygienic conditions were very poor and as early as the 1840s proposals were put forward to improve them. The solution lay in the regulation of polluted water. After the construction of the railway right through the middle of the historical city, Rotterdam 'jumped' across the river and one of the city's fastest expanding districts developed. Whereas the urbanization of the countryside followed the existing pattern, the growth of the harbour completely ignored the existing landscape.

During the early years of this century, the municipal planning board developed into a town planning laboratory. Here new ideas took shape, formulated by Th.K. van Lohuizen, L.H.J. Angenot, A. Bos and, above all, W.G. Witteveen. Van Lohuizen laid the foundations of new survey techniques. Struck by the complete lack of useful data, he wanted to provide town planning with a scientifically valid method of calculating Rotterdam's future development. His starting point was the notion that the city was, above all else, a productive unit, defined as such by its economic structure. This, in turn, determined the make-up of its population. Van Lohuizen considered the reasons why specific branches of economic life should settle in one town instead of in another, in an attempt to explain this structure. His method was empirical; he tried to observe what was actually going on. In doing so, he did not make a sharp distinction between the processes themselves and their physical manifestation. Neither did he separate the survey from the town planning design. Van Lohuizen had specific ideas about the city's future lay-out. He believed, for example, that the extension of deep waterways further inland would stimulate a further decentralisation of industrial activities, thereby necessitating the construction of satellite towns. This, he thought, would not threaten the position of the city, which would remain the area where vital institutions, notable offices, banks and shops, were created. In 1930, L.H.J. Angenot took Van Lohuizen's place as the planning board's survey specialist. Whereas the analysis of the city's economic structure had dominated Van Lohuizen's work, Angenot concentrated on defining of the needs of Rotterdam's future population. He greatly stressed the importance of demographic data. In 1934, he published a study that tried to calculate the future population of Rotterdam in relation to the Netherlands as a whole, estimating the maximum size of the city to be about one million inhabitants.

Of all the planning board's leading personalities, A. Bos was most susceptible to visionary ideas depicting completely new types of cities. He considered the prospects of town planning to be limited by the possibilities of other types of planning, notably social and economic planning, and he was impressed by the revolutionary progress made in the Soviet Union. There, the town plan for the future was made simultaneously with that of its future social and economic content, allowing the creation of completely

new forms of urban life. Bos was fascinated by Sven Noldau's movie *The City of Tomorrow* and a Liga movie entitled *The City of the Future*. For him, the city was primarily a place to live in; instead of economic and demographic analyses, he tried to define the needs of a socially-healthy living environment. Like Van Lohuizen and Angenot, he emphasized the need for scientific research. Only a scientific approach could determine, for example, the number and functions of the parks which should be included in extension plans.

In 1924, W.G. Witteveen was appointed chief of the architectural and town planning department of the municipal planning board. His work reflected the mainstream of town planning ideas as put forward in a series of international conferences, the most influential of which, for town planning in the Netherlands, was held in Amsterdam in 1924. Three themes were particularly important: the 'explosion' of the traditional city, the parksystem and the regional plan. As a consequence of the improved mobility, the region in which the city's influence could be felt had increased enormously. No longer did the city act as physical container of the processes that it generated. Architects, among them famous men such as Le Corbusier, tried to design new patterns to recreate the exploded metropolises in a modern form, declaring historical cities to be obsolete and unhealthy places to live in. A more pragmatic approach to this problem originated in the United States, where the introduction of park systems was propagated not simply as a means of providing green spaces but, above all, as a tool for restoring the city's visual coherence. Since the city's impact superseded its boundaries, town planning had become insufficient to counter the less favourable consequences. A regional plan was called for, covering the entire area dominated by a specific town. Witteveen's primary concern was the problem of how to shape the city in such a way as to render it a visual as well as a functional entity. To achieve this, he experimented with the parkway as a device for manipulating the perspective. Parkway are the most striking elements in the series of plans which he made – an extension plan for Rotterdam south of the river, a plan for Hoboken (1927) and a plan for the Hofplein (1928, with several corrections in the following years). 'What strikes us in Paris, in the famous inner city around the Louvre, the Place de la Concorde, the Bois de Boulogne, is the impressive perspective, the majestic openness that stimulates the feeling of being in a centre of the world while at the same time providing the beauty and solitude that do not bind the stranger with a thousand bonds,' he explained. His pre-war work culminated in a plan for the layout of the zoo. Here, he combined the parkway with a magnificent example of modern architecture, the high rise apartment buildings designed by J. Wils.

The pre-war town planning history of Rotterdam culminated in a regional plan for the island of IJsselmonde. Although Witteveen insisted that the final result could not be regarded as an actual town planning design, the thinking behind the settlement structure of the region did show specific attitudes towards the future shape of the city. Rotterdam would grow as a radial city, the radiating urban bands following the main traffic routes. At the same time, the distance to the central part of the city was expected

to have a bearing on the types of industry that would settle in the various zones, adding a concentric structure to the radial one. Here, too, the coherence of the region would not be disturbed, the inner city continuing to be its focal point.

On may 10, 1940, a German air raid destroyed this focal point. The entire historical city was lost. Even before the fires were extinguished, the municipal planning board had started to prepare the reconstruction. All the elements that were to characterize Witteveen's plan had already been formulated in the previous decades.

Planning during the war: the Netherlands as part of a German 'Grossraum'

During the occupation, the Netherlands were confronted with a political system that combined outspoken ideological views with technocratic characteristics. In order to adapt the Netherlands to this new system, the Germans installed a civil authority headed by Seyss Inquart. This authority exercised control over the Netherlands by using the civil service, which was kept intact, as their tool. After the Dutch Government had fled to England, the heads of the various departments formed a Committee that tried to reconcile the wishes of the occupying power with what was believed to be the general interests of the Dutch people, fearing that their resignation would open the way for the introduction of a German Government or a Government dominated by the Dutch National Socialists. Shortly before surrendering to the Germans, the Dutch military authorities had installed J.A. Ringers as Commissioner for the Reconstruction, his main task being the supervision of the planning for Rotterdam. Ringers laid the foundation of the Dutch post-war planning apparatus. Despite his overtly anti-German attitude, he was left to do his job – which illustrates to what extent the Germans were interested in achieving the maximum efficiency.

The German conception of economic and political life was in many ways the opposite of the views expounded by nineteenth-century liberalism. Their ideas were influenced by a new trend in German geography – the emergence of *Geopolitik*. In contrast to nineteenth century Laissez-Faire, geopolitical thought abandoned the notion of an economic space undivided by political boundaries, replacing this ideal by a world economy divided into three or four geographically defined 'Grossräume'. Each 'Grossraum' was to carry an economic system that functioned independently of the world economy. Whereas economic liberalism had promoted the ideal of free trade, urging governments not to interfere with the economy, geopolitics believed in physical and economic planning. Matured shortly after the First World War, geopolitics became an integral part of the national-socialist doctrine in the nineteen thirties.

In 1935, the *Reichsstelle für Raumordnung* was established as the institution to lead the planning of the German 'Grossraum'. The planners of the *Reichsstelle* were convinced of the precarious situation of Europe in the rapidly changing world, and urged a thorough economic and physical re-organization of the continent to safeguard its leading role in world affairs. The Germans should instigate this rescue operation. Part of the re-organization would be the 'Innere Kolonisation', the construction of

new settlement structures. It was believed that this would alleviate both the depopulation of the countryside and the unhealthy living conditions of the metropolises. Moreover, the structures were intended as a tool for 'reconquering' the depopulated, empty eastern regions of the 'Third Reich', an objective that became very important after the defeat of Poland in 1939 and the addition of vast areas of the Soviet Union in 1941. The scale of these new forms of physical planning called for a scientific approach, and for this purpose the *Reichsarbeitsgemeinschaft für Raumforschung* was established in 1935.

However important physical planning, supported by the new 'Blut und Boden'-ideology, may have been in Germany, its position was challenged by economic planning. Economic planning was carried out by the institution of the *Vierjahresplan*, which was headed by Göring. The Minister of Economic Affairs, W. Funk, made it clear that, even though almost all human activities may possess a physical, spatial component, this did not imply a dominating role for physical planning; he succeeded in winning the ensuing fight with the head of *Reichsstelle*. Characteristic of the evolution of the German political system was the career of F. Todt. Within the institution of the *Vierjahresplan*, he came to the fore as the most capable, technocratic planner. In 1938, Todt, who had considerable fame as the leading planner of the German 'Autobahn', was appointed *Generalbevollmächtigter für die Regelung der Bauwirtschaft*. In this capacity, he took over control of what was undoubtedly the most effective steering device of the entire economy and furthermore, determined the execution of physical plans. In 1940 he was raised to the rank of *Reichsminister für Bewaffnung und Munition*, directly challenging his former chief. From this time at the latest, economic planning prevailed over physical planning.

After Todt's death in 1942, A. Speer took over all Todt's functions. Speer was the architect who designed the plan for the transformation of Berlin, a plan that combined earlier ideas with new conceptions on an enormous, unprecedented scale. During the war, its pompous monumentality was the touchstone of town planning in the German dominated 'Grossraum'. Execution of this plan demanded a very efficient planning machinery, and Speer proved to be capable of creating it. Speer continued the process of amalgamating ever more power. Standardization and rationalization, combined with the redistribution of labour and raw materials, transformed the economy into a powerful instrument for realizing specific goals, and the most important goal at that time was winning the war. R. Ley introduced the same methods in public housing, the mainstream of building activity. Neither Speer nor Ley was opposed to the metropolis, and the implications of the planning techniques they advanced diverged widely from the 'eigentümliche' style which still dominates the historical conception of 'Third Reich' architecture. Speer and Ley promoted an architectural idiom that was, insofar as it resulted from the way the building process was re-organized, modern and technocratic. At the same time, their work proved to be the most eloquent illustration of economic planning superseding physical planning.

Immediately after the German occupation of the Netherlands, a process of

'Gleichschaltung' began. The democratic organs were abolished and measures were taken to integrate the Dutch economy into the 'Grossraumwirtschaft'. In the press, which seems to have needed very little coercion in the first months of the occupation, the new economic situation was greeted as a challenge. German propaganda emphasized the importance of the abandonment of the Dutch economy's historical orientation towards the sea. The *Reichsstelle* sent a *Referent*, H. Roloff, who was to supervise the physical integration of the Netherlands, while at the same time studying those aspects of Dutch town and country planning that might be useful in realizing new settlement structures in the newly conquered eastern regions. Roloff showed a keen interest in the reconstruction of Rotterdam. Confronted with this veritable planning offensive, Ringers began to extend the scope of his institution. Early in 1941, he was appointed Commissioner for the Building trade, a function quite similar to that of Todt in Germany and, therefore, supervised by a representative of its German counterpart. The consequences for public housing were very similar to those in Germany; standardization, mechanization and rationalization, the possibilities of which were to be examined by such pioneers of modern design as W. van Tijen, promoted a fundamentally modern revolution in the building trade.

In his first report to his German superiors, Seyss Inquart pointed out the possibility of rebuilding Rotterdam as a magnificent, German harbour, linking the European 'Grossraum' with the German colonies in Africa and with other 'Grossräume'. The prospects for Rotterdam looked very promising indeed, and both the Dutch and German press published euphoric articles which depicted a newly built, very large and impressive city. Before steps could be taken to realize this vision, however, the municipality of Rotterdam assigned the task of designing a reconstruction plan to Witteveen.

Witteveen's plan for the reconstruction of Rotterdam

As a reconstruction plan, the design for the new Rotterdam should be nothing less than a new form for the social and economic content of the historical city. The physical structure of the inner city had gone, but the legal framework uniting plots with their owners still existed.¹ Creating a new town plan necessitated the removal of this framework. Ringers achieved this by expropriating the entire inner city, adding areas in periphery that would allow Witteveen to carry out a redistribution of functions in the new Rotterdam. To guarantee an esthetically satisfactory townscape, Ringers installed regional Architects' Committees which were to select architects on the basis of their work.

Seyss Inquart believed that Hitler might not accept the plan, and therefore decided that the German planners – Roloff and the representatives of Todt – should limit themselves to critical remarks about Witteveen's proceedings; the plan that Hitler disapproved of should be completely Dutch. If these expectations should materialize, this might open the way for a German take-over after all. To obtain a firmer grip on the

plans. This made the reconstruction of Rotterdam a national concern, a measure clearly intended to counteract the German pressure.

Fear of a German take-over, the threatened prospect that many labourers would be sent to Germany to work in the war industry, and psychological factors, explain the unprecedented speed of the planning in the first months. Within one month, Witteveen presented the outlines of his reconstruction plan. His solution to the railway problem enabled him to abandon the historical division between a 'land city' and a 'water city' by moving the dike to the river. The viaduct in the city was to be maintained, but the station near the river would be abolished; a new viaduct would carry the line to Utrecht alongside the Rotte to a new Central Station. The key to Witteveen's plan was his treatment of the road system in the new city. The replacement of industries and living quarters by shops and offices was completed in one single blow. Around the new city, he projected a ring of broad boulevards which linked the arteries leading to the outskirts. A new element was the axis that began in the Hofplein and led to the east. Witteveen designed the main roads, the carriers of the infrastructure, as three dimensional forms, using the perspective as a manipulative device in the same way as in his pre-war plan. Special attention was given to the crossings of streets and the entrances of the parkways. Through the middle of the new city, a new canal system would link the harbours of the former 'water city' with the Rotte; instead of filling in the obsolete harbours, Witteveen decided to modernize them.

In order to come to grips with the three dimensional aspects of the plan, the destroyed parts of the city were divided into twelve areas, each of which was assigned to a Supervisor. The Supervisor's task was to analyze the quality of the designs handed in by the architects. Superimposed on this subdivision was a classification of areas according to the architectural standard which they demanded. The plan established five levels and the list of architects made by the Architects' Committee was subdivided accordingly. Architects ranking in the lowest category were allowed to work only in the areas of the lowest category, while architects in the highest category could work in all the other areas as well.

Although the content of the city under reconstruction was known – it coincided with the content of the ruined city – a considerable degree of scientific research was necessary. Angenot's survey continued the work he had done before the war. He was ready to admit that, considering the very peculiar circumstances, this was not without risk; the future world economy might change the prospects of the city entirely. However, he could not think of a valid alternative and firmly kept believing that, in the end, demographic research was all that counted in town planning.

Comparing Witteveen's plan with the General Extension Plan for Amsterdam, one is struck by similarities in the principles on which both plans were based. Van Eesteren and Witteveen both used the system of main roads and the parkways as

cohesive devices. Although both plans envisaged a city dominated by offices and shops, demanding easy access, the historical inner city of Amsterdam prevented Van Eesteren's inserting broad traffic roads here; Rotterdam's historical city having been bombed away, Witteveen was able to lead the traffic right into the centre.¹⁷ The survey techniques on which the plans were based were very similar, and this can hardly come as a surprise since Van Lohuizen had laid the foundations for these techniques in Rotterdam. The differences between the two plans were differences in the 'handwriting' of the people who designed them, not differences of principle.

Especially after the German air raids on London, the possibility of Rotterdam's developing into the world's largest port was considered very real, both in the Dutch press and in Germany. This caused growing concern in the German harbours, especially in Hamburg and Bremen. In December 1940, the German Ministers of Economic Affairs, Transport, the Interior, and Food, and a representative of Göring's *Vierjahresplan*, held a conference which was dedicated to this problem. They concluded that nothing should be done to hamper the ambitions of Rotterdam if the Netherlands were to lose their political independence and be united with Germany. If this turned out not to be the case, the future development of Bremen and Hamburg would have to be stimulated by measures that would inevitably harm Rotterdam's prospects. In order to prevent further unrest, publication of stories about Rotterdam's reconstruction would have to be reduced to a minimum. This policy was indeed carried out, and from 1941 onwards the number of articles on this subject decreased considerably.

In 1941, Stephan, a member of the inner circle of Speer's town planning office in Berlin, visited Rotterdam. Before setting off to the Netherlands, he asked Speer for instructions. Speer insisted that he should limit himself to giving advice; under no circumstances was he to give the impression that Speer's office was officially involved in the reconstruction of Rotterdam. Speer preferred to exercise his influence behind the scenes, using an officer, who was referred to by means of a secret code, as an intermediary. There is no certainty as to the identity of this intermediary, and it is not clear whether or not he took any steps to implement Speer's strategy. Stephan followed Speer's orders to the letter. Back in Berlin, he gave an extremely negative evaluation of Witteveen's plan, describing it as romantic and distorted. A year later, after he had heard that parts of the plan were being executed, he repeated his negative advice. What should we think of these events? They do not prove that the Germans were actually engaged in designing alternative plans; neither does it follow that Stephan was the first German town planner to involve himself in Witteveen's plan. However, they do illustrate that, even at the highest levels, German planners took an interest in this reconstruction project. Stephan's criticism derives its rationale from a comparison with the style endorsed by Speer, whose pompous monumentality was indeed lacking in Witteveen's plan.

An attack launched by the Dutch National Socialist Party posed an immediate threat to the architecture of the reconstruction. Considering architecture to be an art form, the National Socialists who led the new official institutions working in this field,

tried to promote a National Socialist attitude. Ringers opposed this attempt, citing the highly favourable evaluation which the architecture of the reconstruction had earned from high ranking German architects – among them Prof. H. Spiegel, who worked for R. Ley. Supported by the representative of Todt, who considered the work of Dutch National Socialist architects to be of an inferior quality, Ringers managed to ward off this attack. As a consequence, National Socialist architecture was excluded from the reconstruction and, since outside of the reconstruction hardly anything was built, from Dutch architecture in general.

A second attack, this time originating from Seyss Inquart and supported by Roloff, left Ringers with more serious difficulties. The Germans demanded that an architectural competition be held in order to give the most important squares in the city a specifically Dutch style of architecture. Ringers and Witteveen did succeed in preventing this competition from affecting the town plan, although they had to consent to the possibility of introducing minor changes. In the event, the results of the competition were of such a low quality that they had no impact on the planning.

What did have considerable consequences for the reconstruction plan was a new phase in the planning of the European 'Grossraum'. In 1941, the Germans invaded the Soviet-Union, conquering vast areas of land that were as rich in raw materials as their inhabitants were in need of a rise in their standard of living. At about the same time, Germany declared war on the United States, destroying the prospects of a flourishing trade with the American 'Grossraum'. It is remarkable that an evaluation by one of Seyss Inquart's members of staff, envisaging continuous warfare between the 'Grossräume', foretold a situation that was almost identical to the grim picture painted by Orwell in *Nineteen Eighty-four*, some seven years before the novel was published. The sea lost its importance as a trade route; there was no need for large harbours any more and German interest in the reconstruction plan for Rotterdam began to fade. Instead, Roloff concentrated on preparations for a second front in Western Europe, and on the 'Ost-kolonisation' – the transportation of large numbers of Dutch labourers, most of them farmers, to the newly conquered areas in the east. Since nothing would come of this policy before the war was over, these activities could not be considered very urgent. In 1944, Roloff was sent to the eastern front and this was the end of German physical planning in the Netherlands.

Ringers regarded the German invasion of the Soviet-Union as the prelude to a rapid German defeat. Whereas the business tycoons in Rotterdam, confronted with the uncertain economic future, lost their interest in the reconstruction, Ringers stressed the importance of making plans and preparing for a swift reconstruction. Fearing disorderly events after the Germans' retreat, he joined the 'political resistance' and helped to organize a provisional Government that should run the country until the Government returned from exile in London. In order to be able to plan the economic reconstruction of the country, Ringers instigated intense economic surveys far beyond the realm of the building trade – which, however, was still considered to be the most efficient steering device.

In april 1943, Ringers was arrested. Although no official charges were made against him, there is little doubt that his underground activities caused this turn of events. Thus began a very peculiar phase in the reconstruction. Ringers remained in charge, even though he was in jail. No successor was appointed; his secretaries were allowed to visit him and in prison he wrote many important reports on the reconstruction problems of Rotterdam.

The end of Witteveen's plan for the reconstruction

In the years that followed, two tendencies ushered in the end of Witteveen's reconstruction plan: the difficulties in designing a proper three dimensional form for the Hofplein, and the introduction of the neighbourhood unit. Both aspects had as their common denominator the growing belief that the new city of Rotterdam would have to be adapted to completely new needs which could not be defined by studying the content of the historical city. In formulating a programme for the new city, the Utopian views of a new post-war world played a decisive role. These views were expounded in the German as well as in the Allied press; their intention was to gather the people's consent and their full co-operation in the war effort. What distinguished the visionary city of the future from its historical predecessor was its social character: the working classes were to be guaranteed a fair deal of the national welfare. Good public houses built in a modern style, parks, facilities for people to spend their holidays and the provision of all the necessary public institutions were to characterize the new towns.

An essential feature of Witteveen's plan was its three dimensional character. Oud, the famous pioneer of modern architecture, was called upon to make a plan for the architecture of the Hofplein, the most important square in the new city. Contrary to Witteveen's original plan, he recommended concave walls to the principal area, thus putting an end to the continuous overflow of public spaces. This led Witteveen to design a counterplan which completely differed from his original conception, explaining his 'volte face' by referring to the re-allocation of a railway station and the possibility of creating an underground tramway system beneath the Hofplein. A ferocious fight broke out between Witteveen and Oud. From prison, Ringers wrote many reports on this problem, but even he did not succeed in restoring the peace. In other parts of the city, the architecture of the reconstruction caused great concern as well. The quality of the designs was considered to be poor and there were problems in adapting to different styles that even the Supervisors found it difficult to cope with.

At the same time, the structure of Witteveen's plan was threatened by an initiative by Bos. Defining the needs of living in a modern society, Bos built up a hierarchical system known as the concept of the neighbourhood unit. The basic element of this thought was the desire to influence people's social behaviour by consciously shaping their living environment. The neighbourhood unit, a module of approximately 15000 inhabitants, should act as an intermediary between the dwelling and society as represented by the city. Levels of provisions would vary according to this

hierarchy. Each neighbourhood unit was to have its own centre (community centre), and only for specific needs would people have to go the inner city. Green spaces would separate the neighbourhood units, each of which would be directed inwards rather than outwards. This ignored Witteveen's vision of the city as an organic whole. Instead of being the means of underlining the city as a visual unity, parkways and main roads would function merely as devices to separate the neighbourhood units. The social ideas invested in the concept of the neighbourhood unit coincided with visions of the post-war social city which were formulated simultaneously in the United States, England and the Netherlands.

Both Ringers and the Rotterdam business tycoons had problems with Witteveen, who was unpredictable and overworked. Early in 1944, it became apparent that Witteveen could no longer remain in office and his task as a liaising between Rotterdam and the national institutions was taken over by C.H. van der Leeuw, Director of the Van Nelle company and the driving force that had made the construction of the famous new factory possible. Van der Leeuw stimulated the work of a small board of businessmen who met regularly to discuss the reconstruction. These discussions were based on the belief that the post-war circumstances would differ fundamentally from the society that had disappeared during the war. They called for a town plan that reflected these changes. As a consequence, the survey methods developed by Angenot were thought to be inadequate; observation of the historical city could not provide the data that were to determine the new city. Van der Leeuw decided that Angenot should leave the survey to people who would be receptive to the new ideas. His choice of economic rather than demographic research was characteristic; whereas the demographer looked backwards, analyzing the existing city and the tendencies that had created it, the economist looked forward to a new era. In other words, the economist took into account the consequences of social and economic planning. What did this mean in practice? The utopian visions of a better world were essentially proposals to re-distribute income, labour and leisure. This approach proved to have a direct bearing on the *execution* of the plan, which aimed at building the provisions necessary to guarantee a basic standard of living first. Once these had been realized, supplementary provisions could be built that encompassed a higher standard of living. The means to achieve this was the distribution of labour and materials according to a priority scheme. Indirectly, the economic survey did influence town planning, which had to provide mass public housing of a relatively high quality, facilities for mass recreation, etc.

After Witteveen had gone, Van der Leeuw called in the assistance of a group of architects from Rotterdam, the most prominent of whom was J.H. van den Broek. Witteveen's secretary, Van Traa, modified the original plan by integrating the suggestions of the architects. The most important consequence was a rigid division between the two-dimensional town plan and the architecture which was to give the plan its three dimensional expression. Streets, squares and the infrastructure lost their meaning as consciously shaped three-dimensional forms; town planning ceased to be a three-dimensional design discipline. When Van der Leeuw asked Van Eesteren to assist

in reshaping the original plan, Van Eesteren strongly emphasized the need for an expert in town planning *design*; he considered Van Traa's modification to be a building programme, not a town plan. Difficulties accompanying the defeat of the Germans, however, prevented his influencing Van Traa's work.

The Basic Plan for the reconstruction of Rotterdam

After the liberation, the economic and political map of the world changed dramatically. The Soviet-Union and the United States of America came to the fore as the world's leading super powers. Germany lay in ruins. Laissez-Faire had given way to economic planning. The Netherlands regained Indonesia, the most important colony which had been conquered by the Japanese in 1942; however, a strong nationalist movement led to its indepenence in 1949. What were the prospects for Rotterdam in the new world? Uncertainty prevailed, and as long as this remained so, its reconstruction was almost impossible. Returning from the concentration camps where he spent the last year of the war, Ringers was appointed Minister of Public Works and Reconstruction, a new Department which amalgamated the functions he had accumulated in the first years of the occupation, personifying the continuity of the reconstruction of Rotterdam. In 1946, Van Traa presented the Basic Plan, which did not differ significantly from the 'building programme' he had drawn up during the last winter of the war, the most important change being the acceptance of the concept of the neighbourhood unit.

By the late nineteen forties, two complexes were being realized that were to dominate the historical image of the reconstruction till the present day: the 'Groothandelsgebouw', which housed a large number of wholesale companies, and the famous 'Lijnbaan', which combined two-storeyed shops with high-rise apartment buildings. Both were examples of 'collective' buildings. Even before the war ended, Van Eesteren had promoted this type of building as a means of escaping from the difficulties encountered in the architectural finish of the plan. The Groothandelsgebouw, designed by H.A. Maaskant and, for a long time, the Netherlands' largest building, distinguished itself by remarkably expressive architecture. A special feature was the possibility for cars to enter the building, and even the first floor. The Lijnbaan was designed in 1948 by Van den Broek and Bakema, developing an idea which was conceived by Van den Broek as early as 1946. This idea was formulated to tackle a specific problem: the impossibility for many ruined shopkeepers to reach the minimum heights prescribed in Van Traa's plan. Van den Broek proppsed to free the shops from their superstructure, adding a row of high rise flats which were placed at right angles to the shops. The shops formed a pedestrian street. Although architectural criticism usually considered the Lijnbaan to be a suburban shopping mall placed in the inner city, Van den Broek intended this concept to enable the construction of a massive urban centre with high densities.

The Basic Plan for the reconstruction of Rotterdam served as a prelude for the 'Randstad' ('border city'), the band of cities linking Utrecht, Amsterdam, Haarlem,

Leiden, The Hague and Rotterdam, forming a semi-circular urbanized area surrounding Holland's 'green heart'. A. Plesman, the Director of Royal Dutch Airlines, coined the term 'Randstad' in 1938, suggesting that a limited number of international airports might function as the nuclei of new megalopolises. Convinced that the war would prove to be an important stimulus for aviation, he contacted the staff of Ringers' Government Committee for Reconstruction, suggesting that the physical planning for the future should take this idea into account. Ringers integrated the concept in his speeches almost immediately, hoping that, as part of the Randstad, Rotterdam would not have to be equipped with the full range of provision that would turn it into a metropolis. Plesman stressed that the Randstad could only be realized if it became an administrative unity; Ringers even hinted at treating the Randstad as a single municipality. The concept blended several themes that were highly topical in the period of the reconstruction. It aimed at a redistribution of economic activity and labour, which was to leave the larger cities. The repopulation of parts of the countryside, creating new settlement patterns, echoed the 'Innere Kolonisation'. In practice, however, the Randstad had some consequences that ran contrary to the original concept. Since the nineteen twenties, town planners, including both Witteveen and Van Traa, had seen the city as a functional entity that was not threatened by its spreading out over the surrounding region, the town centre being the focal point of the regional city. However, various functions of the inner city were transferred to the centres of the neighbourhoods and the satellites, dehydrating the core. Intended to ease bad living conditions, the Randstad hampered specific urban qualities as well. After the war, it proved impossible to accomplish the administrative reform which was thought necessary by the authors of the concept. Consequently, the Randstad lacks a clear political structure. Moreover, the new settlement structures did not coincide with the mobility streams, which is tantamount to stating that they simply do not work. Instead of channeling traffic, they generate it, ignoring the principle of minimum friction that was developed in the Regional Plan for New York and promoted by Witteveen and his colleagues before the war.

Immediately after the liberation, the reconstruction plan became the subject of an intense propagandist effort which centered around a number of themes. The new city of Rotterdam was promoted as the symbol of a new type of society. To stress the international context, an important article by Lewis Mumford was translated and published in a series that specifically dealt with Rotterdam's reconstruction. Furthermore, it was emphasized that the inhabitants would have their say, suggesting that this also reflected the new era – which was to distinguish itself by its democratic nature. Town planning literature focused on two aspects: the flexible nature of the plan, which was capable of changing during its execution, and the way it reflected social renewal. The town plan was a 'neutral' ground layer for the architecture that was to realize it, the functional nature of the architecture pointing towards the function. These functions having been grouped together in the town plan, the architecture manifested one of the main qualities of the plan as well. Until 1952, this image had little

bearing on reality; the reconstruction proceeded at a very slow pace since there was no certainty as to the post-war position of Rotterdam. Then, the Korea crisis proved that the Cold War would remain cold – at least in Europe – and the European continent, only a few years earlier the scene of German attempts to create an almost self-sufficient 'Grossraum', was split into two parts by the 'iron curtain'. With the help of the Marshall Programme, its western half was firmly rooted in the Atlantic Alliance. For this part of Europe, Rotterdam could play a very important role once again. From then on, propaganda and reality began to converge.

The Basic Plan and the Welfare City

The Basic Plan for the reconstruction of Rotterdam represents a new approach to town planning. Its essential feature is a close link between town planning and social and economic planning. The way in which this new form of planning developed in the Netherlands is peculiar; Ringers, whose primary task was to supervise the reconstruction, considered it to be of vital importance to extend his authority to the building trade. In doing so, he controlled the sector of economic activity that was generally regarded as the most effective steering device of the entire economy. His motives for this amalgamation of power were twofold: he wanted to prevent the Germans from taking over, and he genuinely believed it necessary for the modern state to possess an adequate planning apparatus. As a consequence of this major shift in Dutch political institutions, the position of town planning changed considerably. It lost its character as a discipline that focused on the physical, three-dimensional design, leaving the third dimension to (modern) architecture. Unlike the carefully shaped plan made by Witteveen, the Basic Plan limits itself to the physical distribution of human (economic) activities, defined in only four main categories, over the two-dimensional surface of the town. Town planning developed into a discipline, which primarily involved policy making. The three dimensional finish of the plan was left to architecture.

The transition in the character of town planning coincided with the emergence of a specific city model, here referred to as the model of the Welfare City. This morphology can be studied in all the European countries that were engaged in the war, in the occupied countries as well as in the nations that actually fought the war. Architecture was liberated from town planning as a discipline that provided a carefully designed, three dimensional framework. This liberation was further enhanced by softening building regulations and building codes, thereby providing maximum opportunity for architecture to shape the townscape. However, public housing, by far the largest part of what had to be built, was caught in a web of standard types, strict regulations, and rationalized methods of building. Consequently, the centre of the Welfare City, the part of the city where public housing was scarce, stood out as a place where architecture could express itself in a sometimes ostentatious manner. Most of those new extensions were built according to the principle of the neighbourhood unit,

not only because of its social ambitions but also because this proved to be an easy way to distribute the quota of the national housing programme which was assigned to the city as part of the central economic planning. The Welfare City was one of the great ideals in twentieth-century town planning – the desire to help in making society a socially healthy place to live in. Admitting that some of the consequences of this model can no longer be accepted – the reduction of human life into only four functions, its excessively destructive nature when confronted with historical situations, and the sometimes very poor quality of design in the public domain for its heroism should not be forgotten.